CIRM RFA 07-03

Application # FA1- 00618-1 (CIRM Institute)

PROPOSAL:

The applicant proposes construction of a new building that will consolidate key stem cell researchers, expand research on stem cell lines through provision of additional space free of federal funding restrictions and provide new core facilities to augment the considerable cores available at the site.

The CIRM project consists of 46,286 assignable square feet (asf) and 74,832 gross square feet (gsf) with a total cost of $94,514,740 and requested CIRM funding of $40 million. At capacity, the facility will house 25 research teams (PIs) of which 7 will be new recruits.

The project addresses the need for research and support space, eleven core labs, and other office and support space. Of note is that the applicant has committed 25,000 asf of space being vacated by existing investigators to be used for new researchers recruited in the field of regeneration medicine.

Completion of the project is scheduled for July 2010.

Space Summary Table

Space Category	Amount of Space (asf)	Percent of Total	ASF per PI at 25
Lab, Lab Support, PI Offices	35,264	76%	1,411
Core Facilities	2,697	6%	108
Other Offices	480	1%	19
Administration and Other Support	7,845	17%	314
Total	46,286	100%	1,851

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STAFF ANALYSIS

VALUE:

Cost Summary Table

	Total Amount	Amount/ PI
Building	$87,070,014	$3,482,801
Group 2 Equipment	$7,444,726	$297,789
Total	$94,514,740	$3,780,590
CIRM Amount	$40,000,000	$1,600,000
Applicant Amount	$54,514,740	$2,180,590

Costs:

The estimated total project cost is $94,514,740 with a building cost $68,492,611, project management administrative costs of $13,706,937 and a contingency set-aside of $4,870,466 million. Group 2 equipment to be purchased as part of the project is $7,444,726 which is slightly below the average for comparable institutes in this proposal cycle. The applicant identified for transfer a significant amount of existing equipment valued at approximately $5 million, but did not include that figure as leverage. The amount budgeted for equipment is modest ($99/gsf) relative to the other proposals because the applicant plans to relocate a considerable amount of existing equipment to the building from existing campus and leased space, and plans acquisition of equipment in connection with future recruitments

The applicant indicates that costs at this location are typically higher than other regions of the state due to market conditions, logistical constraints of the highly urbanized site and the topography of the building site.

The applicant's requested CIRM amount (excluding cores) is $1,506,771 per PI, 6% lower than the institute average of $1,620,927 per PI.

Sustainability & Innovation

The application indicates that the design is expected to achieve a LEED certification at the Silver level.

Unusual elements that add environmental value include water-conserving fixtures, green roofs that reduce storm water runoff and contamination and use of non-depleting ozone air conditioning systems. Other elements that add value include perimeter lab sinks that

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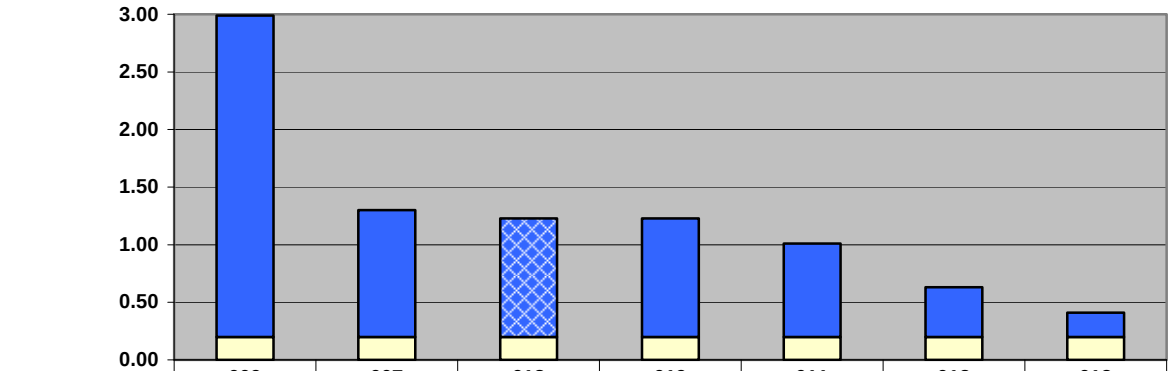
allow reconfiguring of island benches for greater adaptability to changing research methods. The site is very constrained, and the design uses a steel seismic base-isolated foundation system that adapts to the uneven topography of the site rather than extensive excavations thereby reducing environmental impacts and improving sustainable elements. This proposal is innovative from an environmental adaptive design perspective because the four-story building consists of four floor plates staggered in a cascading effect that will provide opportunity for grass-planted roofs, outdoor interactive space and allow mechanical service space to be conveniently constructed beneath each floor.

LEVERAGE:

The application includes leverage of $41,297,740. This is the institutional investments in excess of the required matching funds after conforming to the allowable amount for fees and administrative costs. The CIRM funds to leverage ratio is 1:1.03. When both matching and leverage funds are considered, this ratio rises to 1:1.23. The following table compares the net leverage for this application (crosshatched) to the other applicants in the category of CIRM Institutes.



	609	607	618	619	611	612	613
Leverage	2.79	1.10	1.03	1.03	0.81	0.43	0.21
Matching (.20)	0.20	0.20	0.20	0.20	0.20	0.20	0.20

URGENCY:

The applicant began planning for the project over 3 years ago. Design and environmental documents have been completed and approved by the governing board. The project schedule indicates that multi-phased plans will be completed using the design-build methodology that will occur from July 2008-June 2010. The institution has prequalified two firms as design-builder with both firms engaged in design efforts to enable more

competitiveness with respect to rapid completion of the project and a more comprehensive evaluation of key project design elements, particularly the base-isolation foundation system. The project qualifies for priority consideration because completion is projected within two years from approval of the grant.

The applicant's teams for managing delivery of the project are institutional employees that have overseen more than $1 billion in science projects encompassing more than 1 million square feet. Both of the design-build firms have extensive experience in design-build projects. The design-build firm will be selected by the end of April 2008 with award in May 2008.

SHARED RESOURCES:

The applicant has over 80 technology core facilities under a translational technology resources program, which provides accessible, efficient, and affordable technology services to all investigators at all applicant's campuses. These non-CIRM funded resources include a vivarium with capacity for all animal housing needs for the proposed building, which has surgery suites and imaging facilities to support engraftment of cells in large animal models. The vivarium also houses the genetically modified mouse core for transgenic and systemic, targeted, or conditional knockout mice. The genomics core provides oligonucleotide-based expression arrays, single nucleotide polymorphism (SNP)-based genomic arrays, and fluorescence in situ hybridization (FISH). Also included in shared resources are a mass spectrometry core, a hybridoma/antibody core, a cell imaging facility, a neurobehavioral and a tissue bank. Thus, the institution has extensive facilities and resources that augment resources available to CIRM researchers without adding CIRM cost.

Cores:

- Vivarium
- GMP Facility
- In Vivo Imaging
- Cell Imaging Facilities
- Genomics
- Proteomics
- Hybridoma
- Lentiviral
- Center for Bioengineering and Tissue Regeneration
- CIRM Shared Research and Teaching Laboratory
- Neurobehavioral Core for Rehabilitation Research
- Clinical and Translational Sciences Institute Clinical Research Center
- Clinical Laboratory Improvement Act (CLIA) Certified Laboratories
- Islet Production
- Technology Transfer

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FUNCTIONALITY:

The layout of the facility is both unusual and innovative to adapt to the site. The proposed facility design responds to program needs through the use of open and flexible research laboratories. Support space is provided in an amount equal to the planned laboratory space an important factor in functionality. The researchers' offices are located a half-level-floor above the labs which allows researchers to view the labs from a balcony above. There is also appropriate interactive space. The proposed facility design responds to program needs. The somewhat lower-than-average net-to-gross efficiency of 61.9% is partly due to the linear nature of the constrained site and the tiered structure.

SUMMARY OF ISSUES FOR THE FACILITIES WORKING GROUP EVALUATION

Costs/Functionality: How will the FWG address the allowance of 1,851 asf per researcher, which is considerably less than the Institute average of 3,345 asf but must be considered in light of extensive core facilities available at the institution?

Leverage: What consideration will the FWG give to the applicant's commitment to reserve 25,000 asf of existing space to be vacated by researchers relocating to the new project for future regenerative medicine recruitments? This is the only applicant that made a firm commitment of reinvesting vacated space specifically for regenerative medicine.